



CARBON FREE COMPUTING

Breathe Easier

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Technology and the Environment



Do People Care about Computers and the Environment ?

**Up to
84% of
people
care**

**Recent study¹ by
Greenpeace had some
interesting results:**

- Nine country survey found that from half to three-quarters of computer users say that they would be willing to pay extra for an environmentally friendly computer
 - 54% in Germany
 - 62% in the Philippines
 - 65% in Poland
 - 68% in Britain
 - 78% in Mexico
 - 81% in China
 - 84% in Thailand

¹Research conducted by Ipsos MORI Social Research Institute on behalf of Greenpeace International from 13 January - 27 February 2006.
<http://www.ipsos-mori.com/polls/2006/greenpeace.shtm>



Why do People Care about their “Carbon Footprint”?

- There is increasing pressure on businesses to be seen acting positively on climate change
- Institutional investors, private and public procurement agencies – as well as media, staff and customers – are already holding companies accountable for their ‘carbon footprint’
- The issue is fast becoming a key measure of performance. It’s also, increasingly, a critical factor in both competitive tenders and consumer buying decisions

Carbon Emissions in the News

Blair vows UK Govt to go carbon neutral by 2012

"We are taking another important step today when it comes to greening government, by committing to make by 2012 the government office estate carbon neutral and committing to reduce government's total emissions from buildings by 30 per cent."

UK Prime Minister Tony Blair Jun/06



New Bill aimed at creating energy efficient offices

"The offices sector has the fastest growing energy use apart from aviation. With the proliferation of computers and other electronics, its use of electricity, which has a particularly high carbon footprint, is projected to increase by nearly 45% from 1990 to 2020."

UK MP Tim Yeo Aug/06

FIFA World Cup Goes Carbon Neutral

The 2006 FIFA Soccer World Cup finals to be held in Berlin will be making environmental history this coming year as it strives toward its proclaimed goal of 'climate neutrality.' June/06



Travelocity First Major Online Travel Company to Offer Carbon Offsets with Trip Purchase;

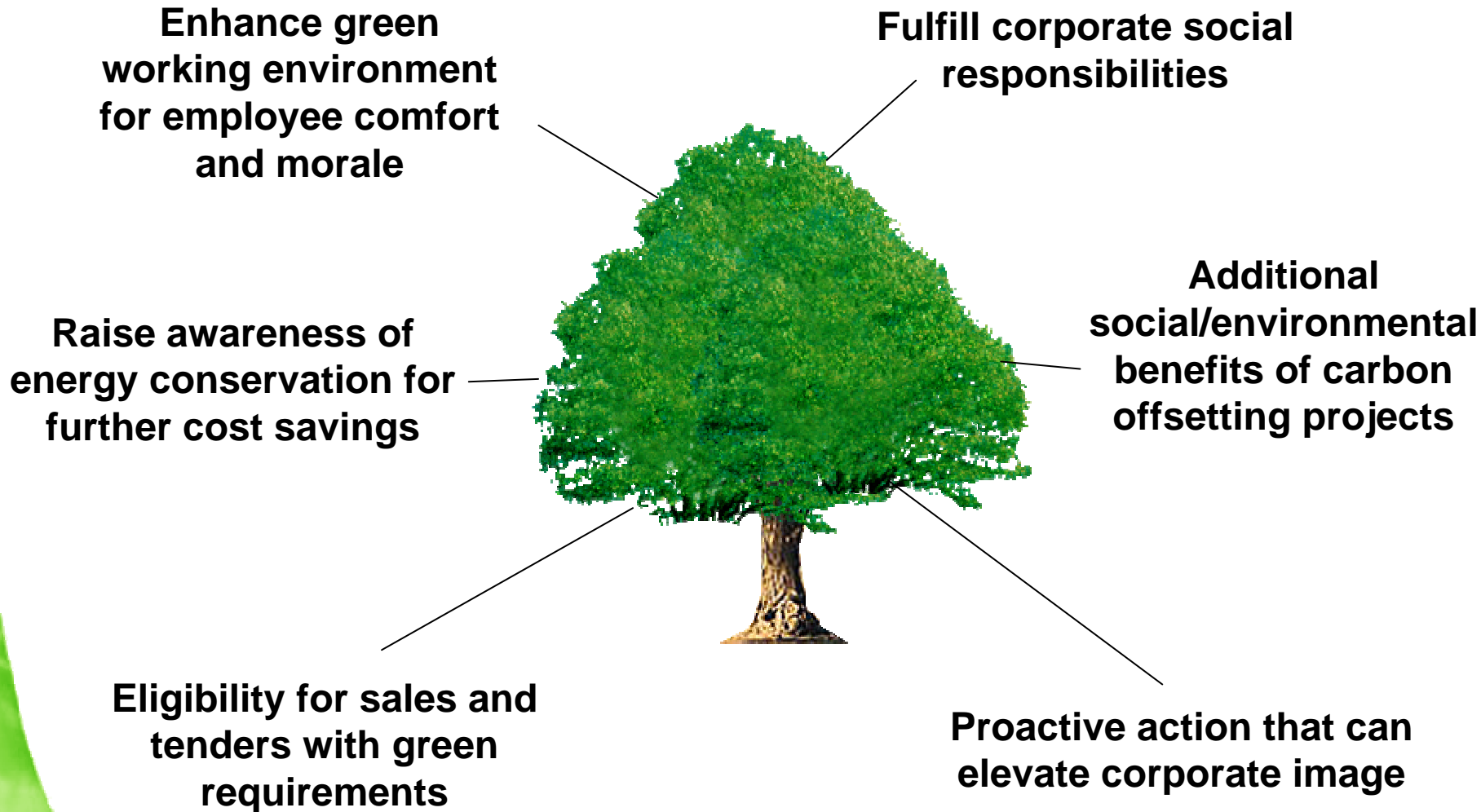
Proceeds Help Regenerate Forests and Wetlands for Future Generations and to Reduce Carbon Impact on Global Warming. Aug/06

Landmark deal in California sets emission limits

California would become the first state to impose a limit on all greenhouse-gas emissions, including those from industrial plants, under a landmark deal reached Wednesday by Gov. Arnold Schwarzenegger and legislative Democrats. Aug/06



Benefits of Reduced Carbon Footprint for Organizations





CLEAN COMPUTING

Clean Computing for a Cleaner World

VIA Clean Computing Initiative

- **Leadership role in environmental computing**
 - Low power focus in all our products
 - World's first Carbon Free Computing products
- **Setting the methodology**
 - How to calculate CO₂ offsets
 - How to rate computing products
- **Logo program and certifications**

Components of VIA Clean Computing Initiative

**Carbon Free
Computing**

**Low Power
Computing**

**Energy Efficient
Computing**

Solar Computing

Quiet Computing

Lead-Free / ROHS





CARBON FREE COMPUTING

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VIA Carbon Free Computing Objectives

- Drive the creation of a new category of “Carbon Free” PCs that will minimize impact on the environment
- Work with selected partners to build, certify, and promote Carbon Free PCs
 - Component suppliers
 - SIs & OEMs
- Provide an effective means to enable commercial, government, and home users to identify “Carbon Free” PCs
- Promote environmentally conscious use of the computer

VIA C7-D: World's First Carbon Free Certified Processor



- **Most Power Efficient Corporate Desktop Processor**
 - Low Power by Design
 - Extremely low power consumption
 - TDP max 20W@1.8GHz
 - Secure by Design
 - Enhanced VIA PadLock Security Co-processor
 - Ultra fast, ultra efficient, ultra secure
 - Negligible impact on CPU/system performance
 - Performance by Design
 - Industry-leading performance per watt
 - Highly efficient new V4 Bus interface up to 800MHz
 - Advanced 90nm process technology
 - SSE2 and SSE3 support for better 3D multimedia

Benefits of VIA C7-D Processor Power Efficiency

Significant cost savings in electricity

**Quieter operation for
more comfortable
working environment**

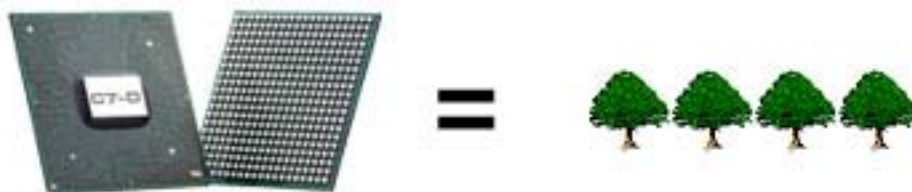


**Reduced heat
released for lower air
conditioning
requirements**

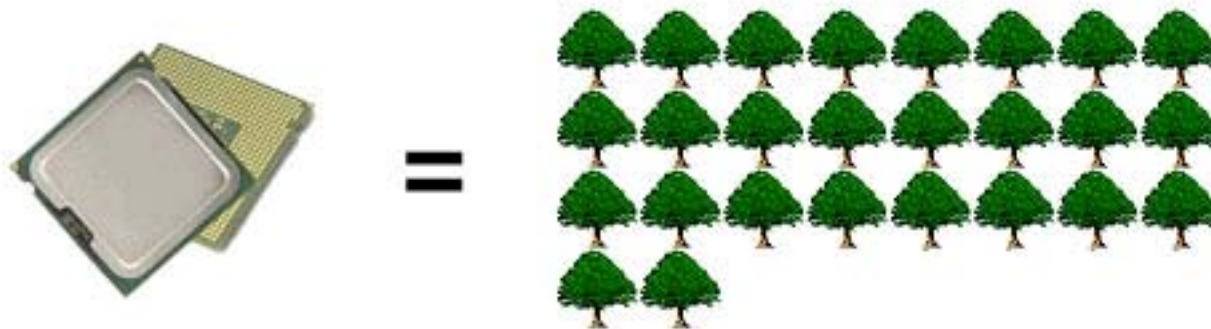
TreeMark™ Processor Rating

The number of trees needed to remove equivalent amount of CO₂ produced over processor lifetime in PC¹

VIA C7®-D Processor



Leading Competitor Processor



Calculating TreeMark™ Ratings

Processor maximum power consumption TDP (watts)

Multiply by usage profile¹ (36.8%)

Multiply by average PC lifetime usage:
24 hours per day x 365 days per year x 3 years

Convert to kilowatts ($\div 1000$)

Multiply by amount of CO₂ produced for every kW of power² (0.501kg)

Amount of CO₂ (kg) processor produces over PC lifetime

Divide by tree carbon sequestration rate³
(7.3kg of CO₂/year, x 3 years = 21.9kg)

Number of trees needed to remove equivalent amount of
CO₂ produced by processor over a PC's lifetime

¹Assuming 27% standby mode, 3% sleep mode, 67% idle mode, 3% performance mode

²Global average carbon intensity of electricity

³Based on average broad leaf tree

VIA Carbon Free Computing Offsets

- **Regional initiatives designed to reduce or remove carbon emissions**
 - Renewable energy
 - Energy efficiency
 - Reforestation projects
- **Investing back into local communities delivering environmental and social benefits**



VIA Carbon Free Computing Logo Program and Certifications

- **Certification Process**

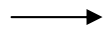
1. VIA & partners calculate the amount of Carbon emissions produced by computing product over its lifetime
2. VIA together with regional partners initiate regional programs or projects to offset carbon



VIA Carbon Free Computing Logo Program and Certifications

1. Certified Processors

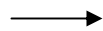
VIA offsets CO₂ for all
VIA C7-D processors
sold



Customers purchasing VIA C7-D
processors have option to use “VIA
Carbon Free Certified Processor” logo
on systems and product pages

2. Certified Systems

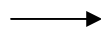
VIA works with partners
to calculate and offset
CO₂ from desktop
systems



Partners place “VIA Carbon Free
Computing Certified System” logo
on their system & relevant product
web pages

3. Certified Components

VIA works with component
partners to calculate and
offset CO₂ from computing
components



Qualified customers place “VIA
Carbon Free Computing Certified
Component” logo on their products
& relevant product web pages

VIA Carbon Free Computing





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